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09/912,849	07/24/2001	Erol Basturk	P4507	5888

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EXAMINER

POLLACK, MELVIN H

ART UNIT	PAPER NUMBER
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2145

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/912,849	Applicant(s) BASTURK, EROL	
	Examiner Melvin H. Pollack	Art Unit 2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>see attached office action</u> . |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11 March 2005 have been fully considered but they are not persuasive. A discussion of the applicant's remarks is provided below.
2. No claims have been added, modified, or cancelled.
3. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "output-link cost values are enhanced with a variable designating a specific destination, the destination expressed as a reportable label that can be tabled and reported by any given node in the network (P. 8, lines 18-21)") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Similarly, the output link cost expression of Figure 2 (P. 8, lines 21 – 27) and that the invention "provides a new cost per router, or forwarding cost, in a network, and teaches and claims manipulation of data routes per DAG label by configuration of the cost variables at a single router (P. 8, line 27 – P. 9, line 11)" are not taught in the claims. Neither is the fact that "cost values are associated with a destination group (P. 9, line 15)", that "values are required for purposes other than retrieving optimum routes (i.e. for load balancing) (P. 9, lines 22-24)", that "input parameters are not required at each connection request, including the destination node (P. 10, lines 10-16)" and other numerous limitations cited as evidence of differentiation that are not in the claims. If the applicant wishes to obtain these limitations, the claims must be amended accordingly.

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4. The applicant alleges that Basso does not expressly disclose, "...the (cost) values are associated individually with a specific destination or destinations..." Basso teaches a topology database (Fig. 2, #28) in which characteristics of each link are stored (col. 4, lines 25-45), including such cost values as bandwidth available and path length (col. 4, line 61 – col. 5, line 35). These costs are based on the source and destination nodes, and thus are associated individually with each destination node or set. Therefore, this limitation is taught.

5. The applicant alleges that Basso does not expressly disclose, "...manipulation of such cost value assignments enables load balancing of data traveling through the network." Applicant points out a section of the background summary in which load balancing is stated (P. 10, lines 5-10). The examiner assumes that the applicant is referring to "The PNNI standard also defines the maximum and available bandwidths specified for each link. It is helpful, in order to provide load balancing in the network, to take into account bandwidth parameters in the path selection algorithm and to select, among the shortest available paths, the path providing the widest bandwidth (col. 2, line 5-15)." Basso goes on to teach the usage of bandwidth as restrictive costs (abstract; col. 2, lines 23-35 and 45-55) to determine optimum routes. In other words, bandwidth considerations are used as part of the decision in routing data to a specific destination or destinations, and the definition of load balancing is thus fulfilled. Even if Basso does not use that specific term elsewhere in the art, the functional equivalency is clear.

6. For the reasons above, the rejection is maintained and therefore is made final.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 3-8, 12-22, and 24-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Basso et al. (6,370,119).

9. For claim 1, Basso teaches a control system (abstract) for controlling data flow over data paths on a data-packet-network according to specific destinations known in the network (col. 1, line 5 – col. 3, line 10) comprising:

- a. A network monitoring system (Fig. 1, #11; Fig. 2) for monitoring network performance parameters (Fig. 2, #27; col. 4, lines 8-45);
- b. A network access system (Fig. 1) for accessing specific nodes in the network (col. 3, line 40 – col. 4, line 8); and
- c. A control software executable on the network access system (Fig. 2, 27) for assigning and changing cost parameters at selected nodes in the network (Fig. 3, #31);
- d. Characterized in that a network administrator monitoring the network or portion thereof uses the network access system and control software to assign and implement cost values at the selected nodes (col. 4, line 30 – col. 5, line 50), the values associated individually with a specific destination or destinations (Fig. 3, #31), the values establishing forwarding costs to be incurred at the selected nodes, and link costs to be incurred per data link between the nodes (col. 4, line 60 – col. 5, line 50) such that manipulation of such cost value assignments enables load balancing of data traveling through the network (Fig. 3, #33 and 34).

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10. For claim 3, Basso teaches that the network monitoring system is a computer station having network connectivity to the network or portion thereof being monitored (col. 4, lines 30-35).

11. For claim 4, Basso teaches that the network access system is a computer station having connectivity to the network or portion thereof to be accessed (col. 3, line 65 – col. 4, line 5).

12. For claim 5, Basso teaches that the cost values are incorporated in a distributive algorithmic computation (col. 1, lines 40-55) to compute shortest path to the associated destination (col. 1, lines 20-30; col. 2, lines 40-60).

13. For claim 6, Basso teaches that the particular node assigned the particular cost values reports those values to all neighboring nodes up-line from the particular node (Fig. 5).

14. For claim 7, Basso teaches that the reported values are used in a distributive computation at the nodes to compute shortest path to a destination (Fig. 7).

15. Claim 8 is drawn to a method that effectively describes the activities undertaken by the hardware system as drawn in claims 1 and 6. It is well known in the art that the underlying method of a given system is functionally equivalent to said system. Therefore, since claims 1 and 6 are rejected, then claim 8 is also rejected for the reasons above. A teaching regarding the method/system equivalence is available upon request.

16. Claim 12 drawn to a method that effectively describes the activities undertaken by the hardware system as drawn in claim 5. It is well known in the art that the underlying method of a given system is functionally equivalent to said system. Therefore, since claim 5 is rejected, then claim 12 is also rejected for the reasons above. A teaching regarding the method/system equivalence is available upon request.

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17. For claim 13, Basso teaches that at least one cost parameter is a forwarding cost through the affected node and is set to a value of infinity (Fig. 6).

18. For claim 14, Basso teaches that at least one cost parameter is an output link cost associated with the particular destination (Fig. 4).

19. Claim 15 is drawn to the limitations in claims 13 and 14. Therefore, since claims 13 and 14 are rejected, claim 15 is also rejected for the reasons above.

20. For claim 16, Basso teaches that installation is performed by software remotely (col. 5, lines 55 – col. 6, line 42).

21. For claim 17, Basso teaches that reporting the at least one cost parameter to the neighboring nodes causes a complete bypass computation of the affected node particular to data routed to the stated destination (col. 8, lines 15-45).

22. For claim 18, Basso teaches that reporting the at least one cost parameter to the neighboring nodes causes a maximal utilization of the affected node particular to data routed to the stated destination (col. 11, lines 3-13).

23. For claim 19, Basso teaches that reporting the at least one cost parameter to the neighboring nodes causes a partial utilization of the affected node particular to data routed to the stated destination (col. 11, lines 3-13).

24. For claim 20, Basso teaches that the assignment and implementation of cost values at routing nodes is pre-configured by the network administrator (Fig. 3, #33) including provision and implementation of a table or tables (col. 6, line 5; routing table) containing optional forwarding costs per destination (Fig. 4) and at least one threshold value applicable to the physical link conditions as may be detected by the node (Figs. 6 and 7) wherein detection by the

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node of an occurrence of the at least one threshold value on any of the physical links triggers an automated reassignment of an appropriate forwarding cost per selected destination using the affected link from the table of optional forwarding costs (Fig. 5, #57 and #58).

25. For claim 21, Basso teaches that the threshold value equates to general traffic load conditions over a physical link (col. 5, lines 40-45; col. 8, lines 15-45).

26. For claim 22, Basso teaches that the reassigned forwarding costs triggered by occurrence of the threshold are computed along with other costs and advertised to neighbors pertinent to data flows containing a destination label or labels responsible for the preponderance of the load (Fig. 5).

27. Claim 24 is drawn to the limitations in claims 8, 20, and 22. Therefore, since claims 8, 20, and 22 are rejected, claim 24 is also rejected for the reasons above.

28. Claims 25 and 26 are drawn to the limitations in claims 9 and 21, respectively. Therefore, since claims 9 and 21 are rejected, claims 25 and 26 are also rejected for the reasons above.

29. For claim 27, Basso teaches that the steps are wholly automated and performed within the selected node (Fig. 2, #27).

Claim Rejections - 35 USC § 103

30. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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31. Claims 2 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basso as applied to claims 1, 8 above, and further in view of Zaumen et al. (6,658,479).

32. For claim 2, Basso does not expressly disclose that the data-packet-network (Fig. 1, #10) is the Internet network. Zaumen teaches a method (abstract) of determining routing costs and performing load balancing techniques (col. 1, line 10 – col. 2, line 10) and further that the data-packet-network is the Internet network (col. 1, line 13). At the time the invention was made, one of ordinary skill in the art would have combined the two inventions by allowing Basso's invention to connect to the Internet for the purpose of allowing connections to third-party resources (col. 1, lines 50-57), i.e. to allow connections to network nodes on the Internet, such as previously established sources of digital data or utilization devices (Basso, col. 3, lines 65-67).

33. Claim 9 is drawn to a method that effectively describes the activities undertaken by the hardware system as drawn in claim 2. It is well known in the art that the underlying method of a given system is functionally equivalent to said system. Therefore, since claim 2 is rejected, then claim 9 is also rejected for the reasons above. A teaching regarding the method/system equivalence is available upon request.

34. For claim 10, Basso does not expressly disclose that the node is a router accessed by a computer station having connectivity to the network or portion thereof to be accessed. Brasso does teach that certain network nodes have similar functionality (col. 3, lines 53-55). Zaumen teaches this limitation (col. 2, line 30 – col. 3, line 65; esp. col. 2, line 60). At the time the invention was made, one of ordinary skill in the art would have combined the two inventions because congestion at the routers is one of the main causes of large delays and hence should be taken into account (col. 1, lines 15-20 and 55-65).

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35. For claim 11, Basso does not expressly disclose that the router is accessed as a result of need established through network monitoring. Zaumen teaches this limitation (col. 3, lines 35-65). At the time the invention was made, one of ordinary skill in the art would have combined the two inventions because congestion at the routers is one of the main causes of large delays and hence should be taken into account (col. 1, lines 15-20 and 55-65).

36. Claims 23 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basso as applied to claims 1 and 24 above, and further in view of Aviani et al. (6,789,125).

37. For claim 23, Basso does not expressly disclose that the data-packet-network is internal to a data router and the nodes are computerized network cards connected together to form the internal network of the node. Aviani teaches a method (abstract) of load balancing (col. 1, line 15 – col. 4, line 26) for which an embodiment may be the internal network (col. 14, line 65 – col. 16, line 57). At the time the invention was made, one of ordinary skill in the art would have combined the two inventions to allow for greater efficiency within a router (col. 15, lines 10-25).

38. Claim 28 is drawn to the limitations in claim 23. Therefore, since claim 23 is rejected, claim 28 is also rejected for the reasons above.

Conclusion

39. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin H. Pollack whose telephone number is (571) 272-3887. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on (571) 272-6159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MHP
01 June 2005


VALENCIA MARTIN-WALLACE
SUPERVISORY PATENT EXAMINER